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(54) PREPARATION OF CRYSTALLINE ALKALI METAL SILICATE GRANULE

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain a granule which not only has a high bulk density and excellent powder flow characteristics and non-blocking properties, but also good storage stability for a long period of time, by compounding at nonionic surfactant, an acid precursor of an anionic surfactant with a crystalline alkali metal silicate.

SOLUTION: (1) A mixture is prepared which comprises (a) 25wt.% or more of a crystalline alkali metal silicate which has a SiO_2/M_2O mole ratio of 1.5 to 2.6 wherein M is an alkali metal, a maximum pH of a 0.10wt.% disperse liquid (20°C) of 11.0 or more, and an ion exchange capacity of 100$CaCO_3$ mg/g or more, (b) a nonionic surfactant, (c) an acid precursor of an anionic surfactant capable of having a lamella orientation in an amount of 25 to 100wt.% relative to component b, (d) a water-soluble non-ionic organic compound having a melting point of 45°C or higher and an average molecular weight of 1,000 or more in an amount of 2 to 30wt.% relative to component b, wherein the total amount of a, b, c and d is 50 to 100wt.% and (a+b+c)/a is 0.1 to 2.0. (2) The mixture above-prepared is granulated at a temperature at which the acid precursor C can be neutralized, thereby to obtain a crystalline granule having a bulk density of 0.6 to 1.2g/ml.